

Claims

1. Food package comprising a substrate tray with an annular peripheral flange, which is lined on the inside with a plastic film, in particular a compound plastic film encompassing the peripheral flange, with the substrate tray inner cavity being hermetically closed off or sealed by means of a preferably oxygen-impermeable lid film over the peripheral flange, characterised by a tray part (40) the package bottom (41) and at least partly the side walls (43; 443) and a collar placed thereon and constituting the peripheral flange (52).
2. Food package according to claim 1, characterised in that the peripheral flange (52) stabilises the side walls (43).
3. Food package according to claim 2, characterised in that the peripheral flange (52) comprises tabs (51) fastened to the side walls (43) of the tray part (40).
4. Food package according to claim 3, characterised in that the tabs (51) are fastened to the inside of the side walls (43).
5. Food package according to any one of claims 1 to 4, characterised in that the tray part (40) and/or the collar (52) is constituted by a paperboard cutout.
6. Food package according to any one of claims 1 to 5, characterised in that the compound plastic film (134) comprises an oxygen barrier layer (136) preferably of polyvinyl alcohol and a seal layer (138) preferably of peelable polyethylene as well as an adhesive layer (137) preferably of a modified polyethylene, in particular a copolymer of ethylene with 6% methacrylic acid partially (50%) neutralised with Na or zinc ions (Surlyn A).
7. Food package according to any one of claims 1 to 6, characterised in that the lid film (120) is formed by a compound plastic film (134)

having on the side facing the paperboard cutout (10) a preferably peelable plastic layer, preferably of polyethylene, and at least one oxygen barrier layer overlying it, preferably of polyvinyl alcohol, and a covering thermal barrier layer for example of polypropylene.

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8. Food package according to any one of claims 1 to 7, characterised in that the plastic film has a starting thickness in the range between 100 and 150 μm depending on the molding depth.
- 10 9. Food package according to any one of claims 1 to 8, characterised in that the tray part (40) and/or the collar (52) consists of a recyclable, preferably multi-layer paperboard.
- 15 10. Food package according to any one of claims 1 to 9, characterised in that the paperboard comprises a cover layer facing the outside of the package and having a first surface structure e.g. suited as an information carrier layer, and an inside second layer having a specific surface structure.
- 20 11. Food package according to claim 10, characterised in that the second layer preferably consists of recycled paperboard.
12. Food package according to any one of claims 3 to 11, characterised in that the tabs (51) are bonded with the side walls (43).
- 25 13. Method for gas-tight or oxygen-tight packaging of foodstuffs in a food package according to any one of claims 1 to 12, wherein the trays comprised of tray part and peripheral flange pass in fixed work cycles through a forming station (FS) and a loading path (BS) followed downstream by an evacuating and sealing station (VS), with the trays being aligned in a row in the forming station (FS).
- 30 14. Method according to claim 13, characterised in that the trays (10) are supplied to the forming station (FS) in a pre-fabricated condition.
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15. Method according to claim 13 or 14, characterised in that lining of the inner surfaces of the substrate trays is preferably performed in line and by means of a compound plastic film (134) covering the entire seal surface of the peripheral flanges (52), which is tack-welded (tack-welding points) to the peripheral flanges of the trays in a transfer station (ÜS) arranged downstream of the forming station (FS).
16. Method according to claim 15, characterised in that transport of the trays (10) through the following stations is performed by means of the plastic film (134) forming the lining which is grasped edgewise by gripping organs of transport means, preferably a transport chain (148).
17. Method according to any one of claims 13 to 16, characterised in that the compound plastic film (134), optionally after heating, is formed into the trays (10) by generating a pressure difference, and is solidly heat-bonded with the respective peripheral flange and the inside of the associated trays (10).
18. Method according to any one of claims 13 to 17, characterised in that the trays (10) cohering by the lining compound plastic film (134) are preferably heat-bonded continuously in the evacuating and sealing station (VS) with a lid film (120) over the annular peripheral flange (52).
19. Device for carrying out the method according to any one of claims 13 to 18, characterised in that the forming station (FS), loading path (BS) and the evacuating station (VS) are combined into a first module (I) preceded by a feed unit for the pre-fabricated trays (10) which forms a second module (II), with the two modules (I and II) overlapping in the direction of transport of the trays (10).
20. Device according to claim 19, characterised in that the first module (I), upstream of the forming station (FS), comprises a tack-welding

station (HS) under which a transfer station (ÜS) for the trays (10) of the second module (II) is located.

- 5 21. Device according to claim 20, characterised in that the transfer station (ÜS) comprises a vertically movable lifting device supporting the peripheral flanges, and the tack-welding station (HS) comprises tack-welding bodies (118) vertically movable in the opposite direction, whereby the plastic film (134) forming the lining and passing therethrough is tack-welded to the peripheral flanges (52).
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22. Device according to claim 21, characterised in that the tack-welding bodies (118) may be heated.
- 15 23. Tray for a package according to any one of claims 1 to 17, characterised by a tray part (40) forming the package bottom and at least partly the side walls, and a continuous collar placed thereon which forms the peripheral flange (52).
- 20 24. Tray according to claim 23, characterised in that the peripheral flange (52) stabilises the side walls (43).
- 25 25. Tray according to claim 24, characterised in that the peripheral flange (52) stabilises the side walls (43).
- 26 26. Tray according to claim 25, characterised in that the tabs (51) are fastened to the inside of the tray part (40).
- 27 27. Tray according to any one of claims 23 to 26, characterised in that the tray part (40) is a paperboard cutout.
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28. Tray according to any one of claims 23 to 27, characterised in that the side walls (43) conically extend downward.
- 35 29. Tray according to any one of claims 23 to 28, characterised in that the bottom (41) has a polygon shape.

30. Method for producing a tray according to any one of claims 23 to 29, characterised in that the cutout of the tray part is initially erected in a first mold (316) and that the collar (52) is subsequently accurately placed thereon in a second mold (318) and connected, preferably bonded, with the latter through selected areas.
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31. Method according to claim 30, characterised in that bonding is performed by means of a cold adhesive.
- 10 32. Method according to claim 30, characterised in that bonding is performed by means of a hot-melt adhesive.

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